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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/033,832	03/03/1998	WALTER W. MOSHER JR.	PREDYN-42891	2572
7590	07/31/2008		EXAMINER	
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		ART UNIT	PAPER NUMBER	
		3611		
			MAIL DATE	DELIVERY MODE
			07/31/2008	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WALTER W. MOSHER JR., MICHAEL L. BEIGEL, and
THOMAS P. MAHONEY

Appeal 2008-0920
Application 09/033,832
Technology Center 3600

Decided: July 31, 2008

Before MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and STEVEN D.A. McCARTHY, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Walter W. Mosher Jr. et al. (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 30, 32, 35-38, 41, 43, and 44, which are the only pending claims. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002). This is the second appeal in this

application. *See* Decision mailed February 27, 2002, in Appeal No. 2001-1638.

The Invention

Appellants' claimed invention is directed to RF (radio frequency) identification devices (RFIDs) and, more particularly, to RFIDs designed to permit transmission of information about a person or thing to whom or which the devices are secured (Specification 1:5-9). Claims 30 and 35, reproduced below, are representative of the claimed invention.

30. A radio frequency identification device,
comprising:

an elongated and disposable flexible strap
having first and second opposite ends and having a
fastening opening in one of said ends;

securement means incorporating a fastening
element engageable with said fastening opening to
removably connect said strap for supporting and
retaining said strap in a closed loop configuration
encircling an object or an individual to be
identified;

a radio frequency identification circuit
carried by said securement means; and

an antenna carried by said strap, and
coupling means for operatively and removably
connecting said antenna with said radio frequency
identification circuit when said securement means
is connected to said strap, and for disconnecting
said antenna from said radio frequency
identification circuit when said securement means
is disconnected from said strap;

said securement means with said radio
frequency identification circuit carried thereby
having said fastening element removable from said
fastening opening prior to disposal of said strap,

and being adapted for subsequent assembly and re-use with a replacement strap;

 said fastening element comprising a boss located internally of said securement means, said strap first end having said fastening opening formed therein for removably attaching said strap first end to said boss, and said securement means further defining an opening extending therethrough for slide-through passage of said strap second end.

35. A radio frequency identification device, comprising:

 an elongated and disposable flexible strap having first and second opposite ends and having a pair of fastening openings formed respectively at said first and second ends of said strap;

 securement means incorporating a fastening element engageable with said fastening opening to removably connect said strap for supporting and retaining said strap in a closed loop configuration encircling an object or an individual to be identified;

 a radio frequency identification circuit carried by said securement means; and

 an antenna carried by said strap, and coupling means for operatively and removably connecting said antenna with said radio frequency identification circuit when said securement means is connected to said strap, and for disconnecting said antenna from said radio frequency identification circuit when said securement means is disconnected from said strap;

 wherein said securement means with said radio frequency identification circuit carried thereby having said fastening element removable from said fastening opening prior to disposal of said strap, and being adapted for subsequent

assembly and re-use with a replacement strap, and further wherein said securement means defines first and second opposite extremities each having a size and shape for interference fit reception respectively into said openings at said strap first and second ends.

The Rejections

Claims 30, 32, and 38 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Peterson (US 5,479,797, issued Jan. 2, 1996) in view of Appellants' admitted prior art (AAPA) (Specification 3:5-8), de Jong (US 4,612,719, issued Sep. 23, 1986), and Tokunaga (US 5,168,281, issued Dec. 1, 1992). Claims 35-37, 41, 43, and 44 stand rejected under 35 U.S.C. § 103(a) as unpatentable over MacDonald (US 5,323,554, issued June 28, 1994) in view of AAPA (Specification 3:5-8), de Jong, and Tokunaga.

THE ISSUES

The issues presented in this appeal are whether Tokunaga teaches an antenna removably connected to an RF identification circuit and, if so, whether it would have been obvious to a person of ordinary skill in the art to combine such teaching with the identification bracelet of Peterson and the identification band of MacDonald, as modified in view of AAPA and de Jong.

FINDINGS OF FACT

FF1 Peterson teaches an identification bracelet substantially similar to the one described in the embodiment of Figures 1 and 2 of Appellants' invention, except without the RF circuit and antenna (col. 1, ll. 6-20; col. 3, l. 41 to col. 4, l. 2, figs. 3 and 4). In

particular, Peterson's bracelet comprises a closure means 10 for use with an identification bracelet or band 20 (col. 3, ll. 18-20). The closure means 10 comprises a lower wall 16 having an upper surface 30 on which a mounting post 32 is disposed for receiving an opening 26 in bracelet or band 20 near first end 22 (col. 3, ll. 56-61). The first end 22 of bracelet or band 20 is attached to the body portion 12 of closure means 10 before the bracelet is assembled about the object or person to be identified (col. 4, ll. 19-21).

- FF2 MacDonald teaches an identification band substantially similar to the one described in the embodiment of Figures 3 and 4 of Appellants' invention. In particular, MacDonald's band includes a flexible tubular member 14 formed into a ring by securing its ends with a connection plug 16, 16', or 16" (col. 2, ll. 34-39; col. 3, ll. 42-45; col. 4, ll. 21-24; figs. 4, 6, 7, and 10).
- FF3 Appellants admit that RF circuits were known and available at the time of Appellants' invention (AAPA, Specification 3:5-8).
- FF4 de Jong teaches a detection element 2 embedded in a holder 1 adapted to be attached by means of a band 6 around the neck or other body part of an animal to be detected. The holder 1 is provided with a flap 3 that clamps one of the ends of band 6. (Col. 1, ll. 7-10; col. 2, ll. 55-60.) The holder 1 is a securement means for supporting and retaining the band 6 in a closed loop configuration encircling the body part of the animal to be detected.
- FF5 Tokunaga's invention "relates generally to an antenna connection device for portable electronic equipment" (col. 1, ll. 6-7).

Tokunaga teaches “an antenna connection device structure for connecting a wristband-embedded antenna to a wristband-type receiver” (col. 1, ll. 63-66). The preferred embodiment described by Tokunaga includes a receiver (or transmitter) housed in a casing, a wristband-embedded antenna plate, and a connection means for simultaneously physically connecting the wristband to the casing and electrically connecting the antenna to the receiver (col. 1, l. 66 to col. 2, l. 2; col. 3, ll. 40-41). An internal receiver 11 is installed inside the casing 1 (col. 3, ll. 57-59). A contact or resilient conductive member 12 is also installed within the casing 1 so as to be mechanically secured to and in electrical contact with the receiver 11 and physically adjacent to an opening 1a in casing 1 (col. 3, ll. 59-68). Antenna plate 3 is connected to connection terminal 4 by spot welding and then insert-molded in wristband 2 (col. 4, ll. 21-23 and 59-62). Connector 5 is mechanically attached to connection terminal 4 and then electrically connected to connection terminal 4 by caulking or welding (col. 4, l. 66 to col. 5, l. 3). Wristband 2, antenna 3, connection terminal 4, connector 5, and packing 6 (a sealing ring seated in packing groove 5a of connector 5) are assembled as one unit and then removably secured to casing 1 by attachment screws 14 (col. 4, ll. 51-56; col. 5, ll. 18-23 and 54-60). Once wristband 2 is secured to casing 1, resilient conductive member 12, being a leaf spring, makes biased connection and contact with connector 5 inserted in opening 1a and packing 6 seals the gap formed between packing groove 5a and casing opening 1a (col. 3, ll. 63-65; col. 4, ll. 53-56). Although

antenna 3 is embedded in wristband 2 and permanently attached to connection terminal 4 and connector 5 by welding or caulking, antenna 3 is removably or detachably connected via resilient conductive member 12 to receiver 11 by attachment screws 14, which removably secure the unit comprising wristband 2, antenna 3, connection terminal 4, connector 5, and packing 6 to the casing.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007).

“A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 1742.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id.

In making determinations of obviousness, all of the features of the secondary reference need not be bodily incorporated into the primary reference. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Moreover, the artisan is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment. *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984).

Further, in making a determination with regard to obviousness, we should not limit ourselves to looking only at the problem Appellants were trying to solve. The question is not whether the combination was obvious to Appellants but whether it was obvious to a person with ordinary skill in the art. Thus, “[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 127 S.Ct. at 1742. “[T]he law does not require that the references be combined for the reasons contemplated by the inventor.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (quoting *In re Beattie*, 974 F.2d 1309, 1312 (Fed.Cir.1992)).

OPINION

In contesting the rejection of claims 30, 32, and 38, Appellants argue the patentability of claims 30, 32, and 38 together as a group. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we select claim 30 as the representative claim to decide the appeal of this rejection, with claims

32 and 38 standing or falling with claim 30. Likewise, in contesting the rejection of claims 35-37, 41, 43, and 44, Appellants argue the patentability of all of those claims together as a group. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we select claim 35 as the representative claim to decide the appeal of this rejection, with claims 36, 37, 41, 43, and 44 standing or falling with claim 35.

The Examiner finds that Peterson discloses all of the limitations of claim 30 with the exception of a radio frequency identification device attached to the securement means and an antenna for the radio frequency identification device secured to the strap (Answer 3¹). This is consistent with our findings above (FF1). Appellants do not specifically dispute this finding. Nor do Appellants appear to dispute the Examiner's determination that it would have been obvious in view of AAPA (FF3) and the teachings of de Jong (FF4) to modify Peterson by attaching an RFID to the securement means (closure means 10) (Answer 3-4). Rather, Appellants' arguments appear to focus on Appellants' contention that Tokunaga does not teach removable connection of an antenna to the receiver or RFID and, in fact, teaches away from a removable antenna (Appeal Br. 12-14; Reply Br. 2). Appellants' arguments are not persuasive as Appellants' contention that Tokunaga does not teach a removable antenna fails to fully appreciate the teachings of that reference. As explained in our findings above, although Tokunaga's antenna 3 is embedded in wristband 2 and permanently attached to connection terminal 4 and connector 5 by welding or caulking, antenna

¹ We make reference in this opinion to the Examiner's Answer ("Answer"), mailed March 28, 2007, to the Appeal Brief ("Appeal Br."), filed September 1, 2006, and to the Reply Brief ("Reply Br."), filed May 25, 2007.

3 is removably or detachably connected via resilient conductive member 12 to receiver 11 by attachment screws 14, which removably secure the unit comprising wristband 2, antenna 3, connection terminal 4, connector 5, and packing 6 to the casing (FF5).

Appellants additionally argue that Tokunaga teaches that connection between the connection terminal and the connector takes place in a casing rather than in a securement means and that Tokunaga does not mention an electrical connection between the antenna and an RFID located in a securement means, as called for in claim 30 (Appeal Br. 15). While Appellants' observation may be correct, Appellants' conclusion that Tokunaga is thus "antithetical to the teachings of the claimed invention" (Appeal Br. 15) does not logically follow from that observation. Tokunaga's teachings are not expressly limited to wristwatch-type electronic equipment; rather, they relate generally to an antenna connection device for portable electronic equipment (FF5). As evidenced by de Jong, the location of a receiver or detection element in a securement means including structure for supporting and retaining a strap or band in a closed loop configuration about a body part of a person or animal to be detected or identified was well known in the art at the time of Appellants' invention (FF4). A person of ordinary skill in the art would have readily appreciated that the teaching of a detachable connection for a wristband-embedded antenna to a receiver by Tokunaga would be equally applicable to a wristband-type device that does not have a casing and that instead has a receiver installed in the securement means for retaining the band in a closed loop configuration, such as the identification bracelet of Peterson as modified in view of AAPA and de Jong. Specifically, as pointed out by the Examiner (Answer 4), such a

person would have recognized that placing an antenna within the band or bracelet of Peterson would further improve the performance of the identification bracelet by allowing the RFID to both transmit and receive signals in a better manner. Such an improvement of Peterson's identification bracelet is no more than the predictable use of prior art elements according to their established functions. Moreover, Appellants have provided no evidence to indicate that such modification of Peterson's identification bracelet to accommodate such an antenna connection would have been beyond the technical grasp of a person of ordinary skill in the art.

Appellants argue that the connection between the wristband and the casing of Tokunaga must be made prior to attaching the device to a person, because the screws that secure the wristband to the casing are attached from the underside and could not be attached once the device is secured to a person's wrist (Appeal Br. 16; Reply Br. 3). Consequently, according to Appellants, a person "contemplating a connection such as that claimed in the instant invention would not look to Tokunaga" (Appeal Br. 16-17). We do not find this argument persuasive. First, Peterson teaches attaching the first end 22 of bracelet or band 20 to body portion 12 of closure means 10 before the bracelet is secured about the object or person to be identified (FF1). Thus, it is not apparent to us why a person of ordinary skill in the art would have been dissuaded from using a technique for connecting the bracelet to the closure means that must be implemented prior to attaching the device to a person. Moreover, in any event, to the extent that a person of ordinary skill in the art would consider the connection means (fastening screws) taught by Tokunaga to be unsuitable for the identification bracelet of Peterson, such a person, being also a person of ordinary creativity, would

also understand how to modify the connection means to better suit Peterson's bracelet. Appellants have not argued, much less proven, that any such necessary modifications would have been uniquely challenging to a person of ordinary skill in the art.

Finally, Appellants argue that none of the applied references appreciate the problem solved by Appellants' invention, namely, reusing expensive RF identification circuitry with a disposable strap containing a relatively inexpensive antenna (Appeal Br. 17). This argument does not demonstrate that the subject matter of claim 30 would not have been obvious, as the law does not require that the references be combined for the reasons contemplated by Appellants.

For the above reasons, Appellants' arguments do not persuade us that the Examiner erred in rejecting claim 30 as unpatentable over Peterson, AAPA, de Jong, and Tokunaga. The rejection of claim 30, and claims 32 and 38 standing or falling with claim 30, is sustained.

Appellants' arguments in contesting the rejection of claim 35 are substantially the same as the arguments discussed above with respect to the rejection of claim 30 and are likewise unpersuasive. Specifically, Appellants do not contest the Examiner's finding that MacDonald teaches all of the limitations of claim 35 with the exception of an RFID attached to the securing means and an antenna attached to the strap (Answer 4). This is consistent with our findings above (FF2). Appellants' contention that Tokunaga does not teach a removable antenna (Appeal Br. 20) fails to fully appreciate the teachings of that reference, as discussed above. Appellants' arguments that Tokunaga teaches a connection that takes place in a casing, not in a securement means, and that the screws that secure the wristband to

the casing of Tokunaga are attached from the underside and could not be attached once the device is secured to a person's wrist (Appeal Br. 21-22) likewise are no more persuasive when directed to the combination of Tokunaga with MacDonald, as modified in view of AAPA and de Jong, than when directed to the combination with Peterson. Finally, Appellants' argument that none of the applied references appreciate the problem solved by Appellants' invention, namely, reusing expensive RF identification circuitry with a disposable strap containing a relatively inexpensive antenna (Appeal Br. 22), does not demonstrate that the subject matter of claim 35 would not have been obvious, as the law does not require that the references be combined for the reasons contemplated by Appellants.

For the foregoing reasons, Appellants' arguments do not persuade us that the Examiner erred in rejecting claim 35 as unpatentable over MacDonald, AAPA, de Jong, and Tokunaga. The rejection of claim 35, and claims 36, 37, 41, 43, and 44 standing or falling with claim 35, is sustained.

CONCLUSION

The decision of the Examiner to reject claims 30, 32, 35-38, 41, 43, and 44 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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Application 09/033,832

hh

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